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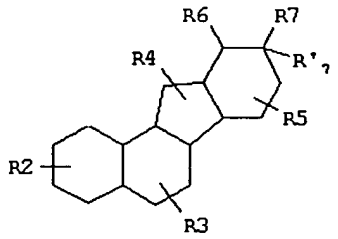
steroidal alkaloid having a structure represented in the general formula (I), or unsaturated forms thereof and/or nor- or homo-derivatives thereof:



Formula I

wherein, as valence permits,

R_2, R_3, R_4, and R_5, represent one or more substitutions to the ring to which each is attached, for each occurrence, independently represent hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

01 Cont

R_6, R_7, and R'_7, independently for each occurrence, are absent or represent hydrogens, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$, or

R_6 and R_7, or R_7 and R'_7, taken together form a ring or polycyclic ring,

with the proviso that at least one of R_6, R_7, or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

m is an integer in the range 0 to 8 inclusive.

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02 4. (Amended) The method of claim 3, wherein:

R_2 and R_3, for each occurrence, is an -OH, alkyl, -O-alkyl, -C(O)-alkyl, or -C(O)-R_8;

R_4, for each occurrence represents H, -OH, =O, alkyl, -O-alkyl, -C(O)-alkyl, or -C(O)-R_8;

R_6, R_7, and R'_7 each independently represent, hydrogen, alkyls, alkenyls, alkynyls, amines, imines, amides, carbonyls, carboxyls, carboxamides, ethers, thioethers, esters, or -$(CH_2)_m$-R_8, or

R_7, and R'_7 taken together form a furanopiperidine, such as perhydrofuro[3,2-b]pyridine, a pyranopiperidine, a quinoline, an indole, a pyranopyrrole, a naphthyridine, a thiofuranopiperidine, or a thiopyranopiperidine

with the proviso that at least one of R_6, R_7, or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle, and preferably R_8 is a piperidine, pyrimidine, morpholine, thiomorpholine, pyridazine.

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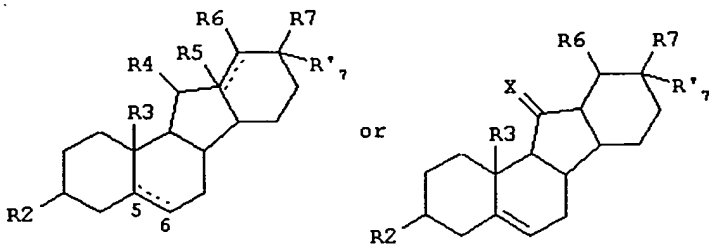
5. (Four Times Amended) A method for inhibiting activation of a *hedgehog-patched* pathway in a patient diagnosed with a hyperproliferative disorder, comprising administering to the patient a composition comprising a purified hedgehog antagonist in a sufficient amount to reduce the activation of the *hedgehog-patched* pathway in a cell of the patient, wherein the antagonist is a steroidal alkaloid having a structure represented in the general formula (II), or unsaturated forms thereof and/or nor- or homo-derivatives thereof:



Formula II

wherein, as valence permits,

R_2, R_3, R_4, and R_5, represent one or more substitutions to the ring to which each is attached, for each occurrence, independently represent hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6, R_7, and R'_7, are absent or represent, independently, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$, or

R_6 and R_7, or R_7 and R'_7, taken together form a ring or polycyclic ring,

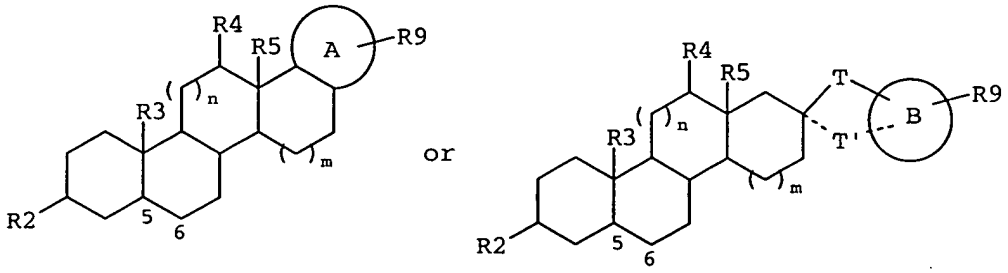
with the proviso that at least one of R_6, R_7, or R'_7 is present and includes a primary or secondary amine;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

m is an integer in the range 0 to 8 inclusive; and

X represents O or S.

6. (Four Times Amended) A method for inhibiting activation of a *hedgehog-patched* pathway in a patient diagnosed with a hyperproliferative disorder, comprising administering to the patient a composition comprising a purified hedgehog antagonist in a sufficient amount to reduce the activation of the *hedgehog-patched* pathway in a cell of the patient, wherein the antagonist has a structure represented in the general formula (III), or unsaturated forms thereof and/or nor- or homo-derivatives thereof:



Formula III

wherein, as valence permits,

R_2, R_3, R_4, and R_5, represent one or more substitutions to the ring to which each is attached, for each occurrence, independently represent hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

A and B represent monocyclic or polycyclic groups;

T represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-10 bond lengths;

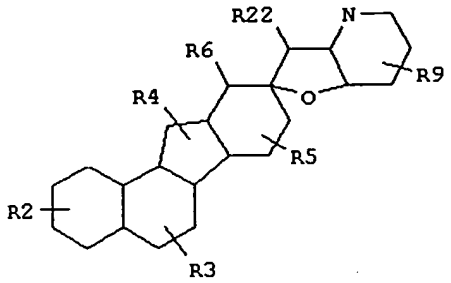
T' is absent, or represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-3 bond lengths, wherein if T and T' are present together, than T and T' taken together with the ring B form a covalently closed ring of 5-8 ring atoms;

R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and

n and m are, independently, zero, 1 or 2;

with the proviso that A and R_9, or T, T' B and R_9, taken together include at least one primary or secondary amine.

7. (Four Times Amended) A method for inhibiting activation of a *hedgehog-patched* pathway in a patient diagnosed with a hyperproliferative disorder, comprising administering to the patient a composition comprising a purified hedgehog antagonist in a sufficient amount to reduce the activation of the *hedgehog-patched* pathway in a cell of the patient, wherein the antagonist has a structure represented in the general formula (IV), or unsaturated forms thereof and/or nor- or homo-derivatives thereof:



Formula IV

wherein, as valence permits,

R_2, R_3, R_4, and R_5, represent one or more substitutions to the ring to which each is attached, for each occurrence, independently represent hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6 is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

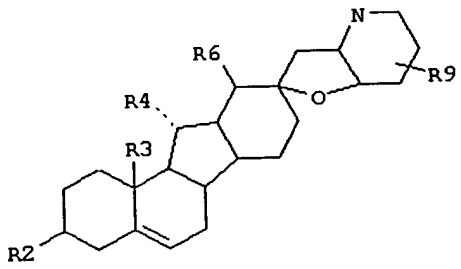
R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

m is 0, 1, or 2; and

R_{22} is absent or represents an alkyl, an alkoxyl or -OH.

8. (Four Times Amended) A method for inhibiting activation of a *hedgehog-patched* pathway in a patient diagnosed with a hyperproliferative disorder, comprising administering to the patient a composition comprising a purified hedgehog antagonist in a sufficient amount to reduce the

activation of the *hedgehog-patched* pathway in a cell of the patient, wherein the antagonist has a structure represented in the general formula (V) or unsaturated forms thereof and/or nor- or homo-derivatives thereof:



Formula V

wherein, as valence permits,

R_2, R_3, R_4, and R_5, represent one or more substitutions to the ring to which each is attached, for each occurrence, independently represent hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6 is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and

m is 0, 1, or 2.

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11. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist does not substantially interfere with the biological activity of aldosterone, androstane, androstene,

androstenedione, androsterone, cholecalciferol, cholestane, cholic acid, corticosterone, cortisol, cortisol acetate, cortisone, cortisone acetate, deoxycorticosterone, digitoxigenin, ergocalciferol, ergosterol, estradiol-17-α, estradiol-17-β, estriol, estrane, estrone, hydrocortisone, lanosterol, lithocholic acid, mestranol, β-methasone, prednisone, pregnane, pregnenolone, progesterone, spironolactone, testosterone, or triamcinolone.

12. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist does not specifically bind a nuclear hormone receptor.

13. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist does not specifically bind estrogen or testosterone receptors.

14. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist has no estrogenic activity at therapeutic concentrations.

15. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist inhibits activation of the *hedgehog-patched* pathway with an ED_{50} of 1 mM or less.

16. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist inhibits activation of the *hedgehog-patched* pathway with an ED_{50} of 1 μM or less.

17. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist inhibits activation of the *hedgehog-patched* pathway with an ED_{50} of 1 nM or less.

20. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hedgehog antagonist is administered as part of a therapeutic or cosmetic application.

30. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hyperproliferative disorder comprises basal cell carcinoma.

31. (Reiterated) The method of claim 3, 5, 6, 7, or 8, wherein the hyperproliferative disorder comprises medulloblastoma.